REMARKS

I. Summary

The present application includes claims 1-3, 7-18 and 20-24. Claims 1-3, 7-18 and 20-22 were rejected by the Examiner. By this amendment, claims 1, 11-12, 14 and 20 have been amended. Claims 23 and 24 are new. No new matter is presented. Support for new claims 23-24 may be found in the specification at least at paragraph 0036.

II. Rejection Under 35 U.S.C. § 102(e)

Claim 22 was rejected under 35 U.S.C. §102(e) as being anticipated by Bulman (U.S. Patent No. 6,351,265).

Claim 22:

Claim 22 was rejected as being anticipated by Bulman. In discussing the basis of the anticipation rejection, the Examiner relies on multiple sections of the Bulman reference. *See* Office Action pp. 8-9. Specifically, the Examiner's rejection relies on both col. 11, lines 22-29 (Example 5) and col. 12, lines 29-40 (Example 6) of Bulman. *See* Office Action, p. 9. However, Example 5 and Example 6 encompass two distinct embodiments of the invention disclosed in Bulman. Bulman expressly distinguishes between the two distinct embodiments by stating "[i]n contrast to the system above [Example 5], an alternative system is provided [Example 6]." *See* col. 12, lines 13-14.

An anticipation rejection may not rely on the combination of multiple, distinct embodiments within the same reference. Net MoneyIn, Inc. v. Verisign, Inc., 545 F.3d 1359,

1369 (Fed. Cir. 2008); Ex parte Cucerzan, Appeal 2009-8190 (BPAI Apr. 29, 2011) (reversing Examiner's anticipation rejection because the examiner relied on multiple distinct embodiments within a single reference). Accordingly, the rejection improperly combines two distinct embodiments of the Bulman reference in rejecting claim 22 as being anticipated by Bulman. Thus, Assignee respectfully requests that the rejection of claim 22 under 35 U.S.C. § 102(e) be withdrawn.

III. Rejections Under 35 U.S.C. § 103(a)

Claims 1-3, 7-9, 11-16, 18 and 20-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lemmons (U.S. Patent Application Publication No. 2003/0028873) in view of Bulman, Wang (U.S. Patent No. 6,990, 681), and Lemmons '981 (U.S. Patent Application Publication No. 2003/0023981).

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lemmons in view of Bulman, Wang, Lemmons '981 and further in view of Wixson (U.S. Patent No. 6,434,254).

Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lemmons in view of Bulman, Wang, Lemmons '981 and further in view of Martinolich (U.S. Patent Application Publication No. 2003/0023971).

Claim 1:

Claim 1 was rejected over Lemmons in view of Bulman, Wang, and Lemmons '981. The Office Action asserts that Bulman generally teaches "selecting, from orientation indices associated with the stored computer generated views, the orientation index of the computer

generated view matching the determined orientation of said predetermined area of said moving object," which is recited by amended claim 1. Assignee respectfully disagrees.

Bulman describes a method for creating a personalized videotape (Examples 6 and 7) in a manner different than claim 1. *See* col. 12, lines 19-42, col. 13, lines 28-42. First, a human subject head is recorded with a video camera. With the subject standing on a rotating turntable, the images are captured by the video camera. The images differ in position and orientation, in a manner which is recorded in conjunction with the image. Bulman further states "a desired positioning and orientation for a cohesive match with the background image may be obtained by selecting the closest image actually obtained." *See* col. 13, lines 29-37.

Bulman fails to disclose selecting an image with an orientation index *matching* the determined orientation of a moving object as recited in claim 1. As disclosed in the specification, determining the orientation of a moving object involves a calculation based on the orientation coordinates (yaw, pitch, and roll) of the moving object and data from the camera. *See* para. [0040]. As such, the determined orientation is a calculated numerical value. Similarly, as recited in claim 1, the orientation index identifies the physical orientation of the computer-generated views. Thus, the selecting step in claim 1 involves a direct numerical comparison between the determined orientation of the predetermined area on the moving object and the orientation indices of the computer generated views. At most, Bulman describes selecting a facial image for a "cohesive match" between the background and foreground image. Bulman makes no mention of comparing orientation indices. Moreover, the selection of the proper facial image is generally described as selecting the "closest" image obtained. Selecting the "closest" image cannot reasonably be considered a numerical comparison between the determined

orientation of an area on a moving object and the orientation indices of computer generated views.

Furthermore, Bulman fails to disclose comparing two orientation values. According to Bulman, the orientation of the related background image is never determined, as the only comparison concerns finding a "cohesive match" to the background image. *See* col. 13, lines 33-37. Selecting a "cohesive match with the background image" cannot reasonably be interpreted to encompass numerically determining the orientation of the background image. Therefore, Bulman fails to disclose a comparison of two orientation values and does not teach "selecting, from orientation indices associated with the stored computer generated views, the orientation index of the computer generated view matching the determined orientation of said predetermined area of said moving object," as recited by claim 1.

The other references fail to fill the gap. The Office Action noted that this feature was not taught by Lemmons. Wang does not fill the gaps left by Lemmons and Bulman. Wang describes a system where a first camera supplies camera data for a virtual camera used to define a viewpoint for a synthetic scene. *See* col. 7, lines 7-12. The position of an object is tracked with a GPS. *See* col. 7, lines 13-19. The Office Action relies on Wang for object tracking. *See* Office Action, p. 13. While Wang discloses determining the orientation of a moving object through a GPS and camera information, Wang fails to disclose "selecting, from orientation indices associated with the stored computer generated views, the orientation index of the computer generated view matching the determined orientation of said predetermined area of said moving object," as recited by claim 1.

Lemmons '981 does not fill in the gaps left by Lemmons, Bulman, and Wang. Lemmons '981describes a system where a television program is transmitted on a first channel and

enhancements to the program are transmitted on a second channel. *See* abstract. The Office Action relies on Lemmons '981 for transmitting enhancement data to a video receiver prior to a video stream. *See* Office Action, p. 13-14. As such, Lemmons '981 fails to disclose "selecting, from orientation indices associated with the stored computer generated views, the orientation index of the computer generated view matching the determined orientation of said predetermined area of said moving object," as recited by claim 1.

Therefore, none of Lemmons, Bulman, Wang and Lemmons '981, or combinations thereof, teach or suggest all of the features of claim 1. Accordingly, Assignee respectfully requests that the rejections of claim 1 and dependent claims 2-3, 7-11, and 14-18 be withdrawn.

Claim 10:

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lemmons in view of Bulman, Wang, Lemmons '981 and further in view of Wixson. Because claim 10 depends from Claim 1, which is allowable as noted above, the rejection of claim 10 should be withdrawn.

Claim 12:

Claim 12 as amended recites "a selector for selecting, among said set of computer generated views, the orientation index of the computer generated view that matches a determined orientation of said predetermined area in the video image as determined from orientation and position data captured by a sensor attached to the moving object and camera position data."

The Office Action acknowledges that Lemmons does not teach or suggest these features. *See* Office Action, p. 17. For the same reasons stated above with respect to claim 1, Assignee

submits that Bulman, Wang, and Lemmons '981 also fail to teach or suggest a selector for selecting, among said set of computer generated views, the orientation index of the computer generated view that matches a determined orientation of said predetermined area in the video image as determined from orientation and position data captured by a sensor attached to the moving object and camera position data.

Accordingly, claim 12 is also patentable over Lemmons, Bulman, Wang, and Lemmons '981. Therefore, Assignee respectfully requests that the rejections of claim 12 and dependent claim 13 be withdrawn.

Claim 17:

Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Lemmons in view of Bulman, Wang, Lemmons '981 and further in view of Martinolich. Because claim 17 depends from Claim 1, which is allowable as noted above, the rejection of claim 17 should be withdrawn.

Claim 20:

Claim 20 as amended recites "selecting, from the orientation indices associated with the first set of computer generated views, an orientation index matching the determined orientation of the predetermined area of the moving object in the video image."

The Office Action acknowledges that Lemmons does not teach or suggest these features. *See* Office Action, pp. 21-22. For the same reasons stated above with respect to claim 1, Assignee submits that Bulman, Wang, and Lemmons '981 also fail to teach or suggest selecting, from the orientation indices associated with the first set of computer generated views, an

orientation index matching the determined orientation of the predetermined area of the moving object in the video image as recited in claim 20.

Accordingly, claim 20 is also patentable over Lemmons, Bulman, Wang, and Lemmons '981. Therefore, Assignee respectfully requests that the rejections of claim 20 and dependent claim 21 be withdrawn.

IV. New Claims 23 and 24

Claims 23 and 24 recite limiting the number of computer generated views that are generated by a computer based on a display frequency of a stream of video. As disclosed in the specification, when calculating the oriented picture views of a preregistered picture, the number of calculated oriented picture views can be advantageously limited according to a video display rate (such as a television frame rate of 25 frames per second). *See* para. [0036]. And while the computation required to generate the oriented views is purposefully limited, the generated set of oriented views is comprehensively sufficient to encompass every orientation of the predetermined area of the moving object. Additionally, the limited number of computer generated views is sufficient regardless of the speed of the moving object. *See* para. [0036]. None of the cited prior art discloses, teaches, or suggests the numerical limiting of computer generated views based on a display frequency of the video stream as recited in claims 23 and 24.

Lemmons describes a system in which labels are superimposed post-production into a video stream. *See* abstract. The labels may include advertising material. *See* Fig. 2, 4A-5B. A central computer contains data files of the labels. Lemmons also explains that the data file may comprise "placement and contour data" obtained by "computer recognition, physical manipulation, or other techniques." *See* ¶ 57. Lemmons does not describe generating multiple

oriented views of an image, much less "generating, through a computer, a first set of computer generated views of the preregistered picture in various orientations, wherein the number of computer generated views that are generated is limited based on display frequency of the stream of video," as recited by claims 23 and 24.

Similarly, Bulman does not describe "generating, through a computer, a first set of computer generated views of the preregistered picture in various orientations, wherein the number of computer generated views that are generated is limited based on display frequency of the stream of video." Bulman describes a method for creating a personalized videotape (Examples 6 and 7). *See* col. 12, lines 19-42, col. 13, lines 28-42. First, a human subject head is recorded with a video camera. With the subject standing on a rotating turntable, the images are captured by the video camera. The images differ in position and orientation, in a manner which is recorded in conjunction with the image. However, Bulman never discloses limiting the number of captured views, instead generally describing the capture of a sequence of images through a video camera. *See* col. 13, lines 27-33. To the extent that the captured sequence of images disclosed in Bulman is inherently limited in number, Bulman nevertheless fails to disclose purposefully limiting the number of captured images based on a display frequency of a video, as recited in claims 23 and 24.

Wang does not fill in the gaps left by Lemmons and Bulman. Wang describes a system where a first camera supplies camera data for a virtual camera, used as information to define a viewpoint for a synthetic scene. *See* col. 7, lines 7-12. A position of an object is tracked with a GPS. *See* col. 7, lines 13-19. The Office Action relies on Wang for object tracking. *See* Office Action, p. 13. Wang does not teach or suggest "generating, through a computer, a first set of computer generated views of the preregistered picture in various orientations, wherein the

number of computer generated views that are generated is limited based on a display frequency of the stream of video."

Likewise, Lemmons '981 does not fill in the gaps left by Lemmons, Bulman, and Wang. Lemmons '981describes a system where a television program is transmitted on a first channel and enhancements to the program are transmitted on a second channel. *See* abstract. The Office Action relies on Lemmons '981 for transmitting enhancement data to a video receiver prior to a video stream. *See* Office Action, pp. 13-14. As such, Lemmons '981 also fails to teach or suggest "generating, through a computer, a first set of computer generated views of the preregistered picture in various orientations, wherein the number of computer generated views that are generated is limited based on a display frequency of the stream of video," as recited by claim 23.

Therefore, none of the cited prior art teach or suggest all of the features of claims 23 or 24. Assignee respectfully requests allowance of claims 23 and 24.

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CONCLUSION

In view of the above amendments and remarks, Assignee respectfully submits that this application is in condition for allowance and such action is earnestly requested. The Examiner is invited and encouraged to contact the undersigned attorney at the number below for further assistance to expedite allowance of this application.

Respectfully submitted,

Date: June 16, 2011

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